

## **REMARKS**

In response to the Office Communication dated August 29, 2006, the Notice of Non-Compliant Amendment dated May 24, 2006, and the Office Action dated February 16, 2006, Applicants respectfully submit the present Amendment and Remarks, and reconsideration is respectfully requested.

In the Office Communication mailed August 29, 2006, the Examiner is alleging that because claims 21-31 are directed to method claims, they are independent or distinct from originally filed claims 6-20 which are directed to product claims. Therefore, the Examiner is alleging that new claims 21-31 are directed to non-elected claims, and will not be considered for examination.

In other words, the Examiner is treating this case as though (1) method claims 21-31 were originally filed with product claims 6-20; (2) both set of claims were restricted into two independent or distinct groups in a restriction requirement; and (3) product claims were elected. Hence, method claims 21-31 are non-elected claims, and thus are not under consideration for examination.

Applicants respectfully point out that claims 21-31, as well as claims 1-20, are now cancelled.

Applicants have added product claims 32-41, and respectfully request that the Examiner consider and enter these claims as they are parallel to originally filed claims 6-20 which are product claims.

### **Amendment to Claims**

Claims 1-31 are cancelled in the pending application. Claims 32 to 41 have been added and are currently pending in this application. Support for new claims 32-41 can be found throughout the specification, particularly in the original claims, in the examples, and at page 2, lines 12-20 of the

specification. Specifically, support for new claim 32 can be found in original claims 6 and 10 of the PCT application as it was filed and further specifies that the substrate contains a thermoplastic binder enabling the fibers to bind together as supported by page 2, lines 12-20 of the specification.

Claim 33 recites the preferred range as it was recited in the PCT application, particularly in the original claims.

Claim 34 recites the preferred antimicrobial agent. Support for this can be found throughout the specification, particularly in the original claims, in the examples, and at page 2, lines 12-20 of the specification.

Claim 35 is directed to the preferred thermoplastic binders. Support for this can be found throughout the specification, particularly in the original claims, in the examples, and at page 2, lines 12-20 of the specification, and more particularly at page 2 lines 17-19 of the specification.

Claim 36 recites the preferred thermoplastic binder. Support for this can be found throughout the specification, particularly in the original claims, in the examples, and at page 2, lines 12-20 of the specification, and more particularly in the examples which are carried out with EVA as thermoplastic binder.

Claim 37 recites the preferred method for the preparation of the substrate. Support for this can be found throughout the specification, particularly in the original claims, and in the examples, and more particularly at page 3 lines 2-7 of the specification.

Claim 38 is parallel to original claim 3 of the PCT application.

Claim 39 is parallel to claim 7 of the PCT application but has been limited to impregnated towels and absorbing papers, said application being

particularly interesting applications of non-woven substrates in which the fibers are bound together.

Claim 40 is parallel to original claim 8 of the PCT application.

Claim 41 is parallel to original claim 9.

No new matter has been added. Hence, Applicants respectfully request consideration and entry of these claims.

#### **Claimed Invention**

The present invention, as claimed, recites a substrate based on paper fibers of the non-woven type obtained by a dry method comprising a thermoplastic binder and an antimicrobial agent. Specifically, the claimed invention is directed to a substrate based on paper fibres of a non-woven type, obtained by a dry method which comprises (1) a thermoplastic binder enabling the fibres to bind together; and (2) an antimicrobial agent selected from the group consisting of zinc, silver and copper gluconates. The antimicrobial agent being present in the substrate at a concentration between 0.01 and 10% by weight, thereby conferring antimicrobial properties to the substrate.

#### **Summary of the Office Action**

In the Office Action dated February 16, 2006, the Examiner objected to the Abstract for containing less than 50 words. The Examiner also rejected Claims 6-8, 10-13, and 18-20 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) for being obvious over Sine et al. (USPN 6,183,766). In addition, the Examiner rejected Claims 9 and 14-17 under 35 U.S.C. §103(a) for being obvious over Sine et al. (USPN 6,183,766).

## **RESPONSE**

### **Objection to the Abstract**

The Abstract of the present application has been objected for containing less than 50 words. Applicants respectfully point out that the Abstract has been amended to clearly define the present invention by adding a paragraph reciting that the present invention relates to a method for manufacturing a finished product having antibacterial activity comprising treating at least one face of a substrate comprising at least 50% by weight of cellulosic fibers with a composition containing as sole antimicrobial agent, a metal gluconate chosen in the group consisting of zinc gluconate, silver gluconate, copper gluconate or mixtures thereof. Therefore, the Abstract, as amended contains more than 50 words (and less than 150 words) as required by the Examiner.

Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

### **Rejections under 35 USC §102(b) or §103(a)**

In the Office Action, the Examiner also rejected Claims 6-8, 10-13, and 18-20 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) for being obvious over Sine et al. (USPN 6,183,766). The Examiner also rejected Claims 9 and 14-17 under 35 U.S.C. §103(a) for being obvious over Sine et al. (USPN 6,183,766). The Office Action alleges that Sine et al. disclose a composition comprising 0.1% to 10% zinc gluconate which "may be comprised within a substrate comprising at least 50% cellulosic fibers." Although the Examiner acknowledges that Sine et al. do not disclose that zinc gluconate can be used as an antimicrobial agent, the Examiner contends that because Sine et al. disclose an article for skin sanitizing,

therefore zinc gluconate must have an inherent property of being an antimicrobial agent. The Examiner further contends that Thaman et al. (which is recited in the Sine et al. document and is incorporated therein) disclose a substrate that may be a nonwoven fiber and used as a sanitary article, baby article, and hand wipe. Therefore, the Examiner concludes that Sine et al. at least disclose the claimed invention, or in the alternative, suggests the claimed invention.

The Examiner also allege that although Sine et al. do not disclose the use of a substrate as a food packaging article, an absorbent pad, or an impregnated diaper, it would have been obvious for one of skill in the art to use the substrate of Sine et al. in those recited products. Further, although the Examiner acknowledges that Sine et al. do not disclose "a substrate comprises from about 0.1% to about 10% by weight antimicrobial agent," the Examiner alleges that a "prima facie case of either anticipation or obviousness" has been established and placed the burden on the Applicants. Applicants respectfully traverse the above rejections and allegations.

As discussed above, the present invention, as claimed, is directed to a substrate based on paper fibres of a non-woven type, obtained by a dry method which comprises (1) a thermoplastic binder enabling the fibres to bind together; and (2) an antimicrobial agent selected from the group consisting of zinc, silver and copper gluconates. The antimicrobial agent being present in the substrate at a concentration between 0.01 and 10% by weight, thereby conferring antimicrobial properties to the substrate.

Applicants respectfully point out that Sine et al. neither teach nor suggest the claims of the present invention. The Sine et al. document relates to compositions for sanitizing and moisturizing skin surface. These

compositions comprise an essential constituent which is an alcohol antiseptic intended to kill or reduce the growth of micro-organisms.

The Sine et al. document specifies that the composition may also comprise antimicrobial agents which may be metallic salts such as zinc or copper (see column 12, lines 37-4)) and which may be at concentrations comprised between 0.001 and 5%. However, Applicants respectfully point out that zinc gluconate as cited in the Sine et al. document, among other additional constituents of the composition, as a component intended to control odors (see column 9, line 59 and column 10, lines 6 and 7). Although these constituents are comprised in the composition at concentrations between 0.1 and 10%, they are not intended to have antimicrobial properties as claimed in the present invention.

Furthermore, at columns 16-17, Sine et al. disclose that their compositions may also be incorporated into insoluble substrates intended to be applied to skin, and not to a substrate based on paper fibres of non-woven type as claimed in the present invention. The passage at columns 16-17 cites to US Patent No. 4,891,227 (Thaman et al.) which is by reference therein and is cited by the Examiner. Applicants respectfully point out that US Patent No. 4,891,227 relates to medicated cleansing pads which may comprise two or more layers of non-woven materials, and thus neither teaches nor discloses a substrate based on paper fibres of non-woven type exhibiting antimicrobial properties as claimed in the present invention.

Applicants respectfully point out that although that Sine et al. (US 6,183,766) describes a composition which may comprise zinc gluconate (see column 10 line 25) and which may be incorporated into an insoluble substrate such as those described in US Patent No. 4,891,227 (see column 7 lines 33

and the following), there is nothing in either in the Sine et al. document (US Patent No. 6,183,766) or in US Patent No. 4,891,227 which teaches or suggests the quantity of zinc gluconate to be incorporated into the composition and the quantity of composition to be incorporated into the substrate, so that the final concentration of zinc gluconate in the substrate be sufficient to confer to said substrate antimicrobial properties as claimed in the present invention.

Although Sine et al. disclose compositions that may include antimicrobial properties; however, these antimicrobial properties are linked to the presence of an essential component which is an alcohol antiseptic and when zinc gluconate is used, it is only as an optional constituent of the composition intended for controlling odors.

In addition, the antibacterial agent of Sine et al. is an alcohol and not a metal gluconate. As disclosed in the Sine et al. document, the antimicrobial agent is an alcohol used in very high proportions (44%-99%). Due to the high proportion of alcohol, the zinc gluconate of Sine et al. cannot possibly have its own antibacterial effect, especially when it only exists in the amount of 0.1% to 10%.

At most, Sine et al. disclose that the concentration of zinc gluconate is the range of concentration of said component (or other components which are cited) in the composition. There is no teaching or suggestion in the Sine et al. document concerning the quantity of composition to be incorporated into a substrate, let alone a substrate based on paper fibres of a non-woven type, obtained by a dry method which comprises (1) a thermoplastic binder enabling the fibres to bind together; and (2) an antimicrobial agent selected

from the group consisting of zinc, silver and copper gluconates, wherein the antimicrobial agent being present in the substrate at a concentration between 0.01 and 10% by weight, thereby conferring antimicrobial properties to the substrate.

In view of the above, it is clear that Sine et al. only teach the use of a composition which may contain a gluconate to impregnate an insoluble substrate without giving any teaching or suggestion concerning the concentration to be used to confer to the support antimicrobial properties linked to the presence of gluconate as claimed in the present invention.

Applicants respectfully point out that neither Sine et al. nor Thaman et al. (US Patent No. 4,891,227) teach or suggest the quantity of gluconate which is to be presented in the final impregnated substrate so that the substrate would have antimicrobial properties linked to the presence of the gluconate as claimed in the present invention. There is nothing in the Sine et al. document or the Thaman et al. document that teaches or suggests antimicrobial properties exhibit in a substrate as claimed in the present invention.

Indeed, even if the composition according to Sine et al., may contain up to 10% of gluconate, there is nothing in that document or in Thaman et al. which could suggest to those skilled in the art the quantity of the composition to be incorporated into the substrate in order to have in the final product an efficient quantity of zinc gluconate to enable the gluconate to have an antimicrobial effect per se, the effect being not at all sought by Sine et al. since according to Sine et al. the antimicrobial property is linked to the presence of the essential component which is an alcohol antiseptic.



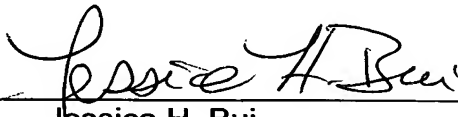
In view of the above, Applicants respectfully request reconsideration and withdrawal of these rejections.

**CONCLUSION**

In light of the foregoing amendments and remarks, Applicants respectfully submit that the application is now in condition for allowance. Should any minor matter remain, or should the Examiner feel that an interview would expedite the prosecution of this application; the Examiner is invited to call the undersigned at his convenience.

Respectfully submitted,

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